

**Remarks/Arguments:**

Claims 2, 7-10, 12-17, 20, and 22-33 are pending in the present application. Claims 2, 7-10, 12-17, 20, and 22-33 have been allowed.

Claims 22, 25, and 29 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting over claims 12-14 of copending Application No. 11/092,399. Applicants have submitted herewith a timely filed terminal disclaimer and as such, Applicants respectfully submit that this rejection is overcome.

Claims 22, 23, 25, 26, 29 and 30 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Miyoshi (U.S. Patent No. 5,699,951). Claims 22 and 24-33 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Johnson et al. (U.S. Patent No. 6,640,423). Claims 22, 25, 26, 28-30, 32, and 33 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ohkubo et al. (U.S. Patent Application Publication No. 2003/0084563).

Applicants respectfully disagree with the rejection of claims 22-33 under 35 U.S.C. § 102(e). More specifically, Applicants respectfully submit that none of claims 22-33 are anticipated by, or obvious in view of, any of Miyoshi, Johnson, and Ohkubo.

As discussed by Applicants' representative during the personal interview with the Examiner on June 13, 2006, an important aspect of the present invention as recited in claim 22 is "moving a bond head of the wire bonding system in a first substantially horizontal direction during the high speed wire bonding operation" and also "moving the workpiece in a second substantially horizontal direction during the high speed wire bonding operation by moving the work table, thereby providing high speed translation of the workpiece in the second substantially horizontal direction." Thus, according to the exemplary embodiment of the present invention recited in claim 1, motion along the recited horizontal axes is separated between the bond head and the work table. By separating the motion along the horizontal axes, an important benefit is achieved in that the speed of the wire bonding operation is increased. Such a feature would not be obvious in view of the prior art because it would be counter-intuitive to separate such motion systems because two different motion systems would need to be designed, developed, purchased, manufactured, etc.

None of the cited references disclose or suggest this feature.

Miyoshi discloses a wire bonder that drives along both horizontal axes (i.e., the x-axis and the y-axis) using the bond head (i.e., via XY driving mechanism 53) (See Fig. 5 and column 5, lines 48-60). Miyoshi includes no disclosure of motion of a work piece during the actual wire bonding operation using the work table. Miyoshi does disclose conventional pushing device 42 for moving leadframes along the work table; however, this motion positions the leadframe for the wire bonding operation but does not provide for high speed motion during the wire bonding operation. For example, Miyoshi provides "pushing device 42 is provided . . . for pushing the site of lead frame L/F towards the bonding stage 32 during the above-mentioned bonding work and fixing it in position." (See column 5, lines 1-5) (emphasis added).

Johnson relates to a die bonding machine, and not a wire bonding machine (See abstract). Thus, no wire bonding operation is disclosed. As is known to those skilled in the art, the motions of a wire bonding system are very different than those of a die bonding system. Johnson does disclose die holder 100 which rotates and can be moved in a number of linear directions (See Fig. 3 and column 8, lines 55-62). However, the above-recited features of claim 22 of the present application are not disclosed or suggested.

As understood by Applicants representative, Ohkubo does not relate to wire bonding. A bonding head 23 and a bonding tool 25 are disclosed (See Fig. 3); however, these are not components of a wire bonding machine or at least are not described as such. Regardless, the motions along both the x-axis and the y-axis are provided via bonding head 23 (See paragraph 143). The above-recited features of claim 22 of the present application are not disclosed or suggested.

Accordingly, Applicants respectfully submit that the newly cited references (including Miyoshi, Johnson, and Ohkubo) are simply cumulative of previously cited art. Applicants respectfully submit that claim 22 is patentable over the art of record. Claims 23-33, which are dependent (either directly or indirectly) on claim 22, are also patentable over the art of record.

In the event that the Examiner believes it would be helpful to advance prosecution of the present application, Applicants representative requests a personal or telephone interview to discuss the merits of the present application. During such an interview, one of the inventors (or another skilled in the art) would also be available to discuss the present application and the art of record.

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The above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,

  
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The Commissioner for Patents is hereby authorized to charge payment to Deposit Account No. 50-3643 of any fees associated with this communication.

I hereby certify that this correspondence is being E-Filed with the United States Patent and Trademark Office on the date shown below.

November 21, 2006

  
Tonya M. Berger